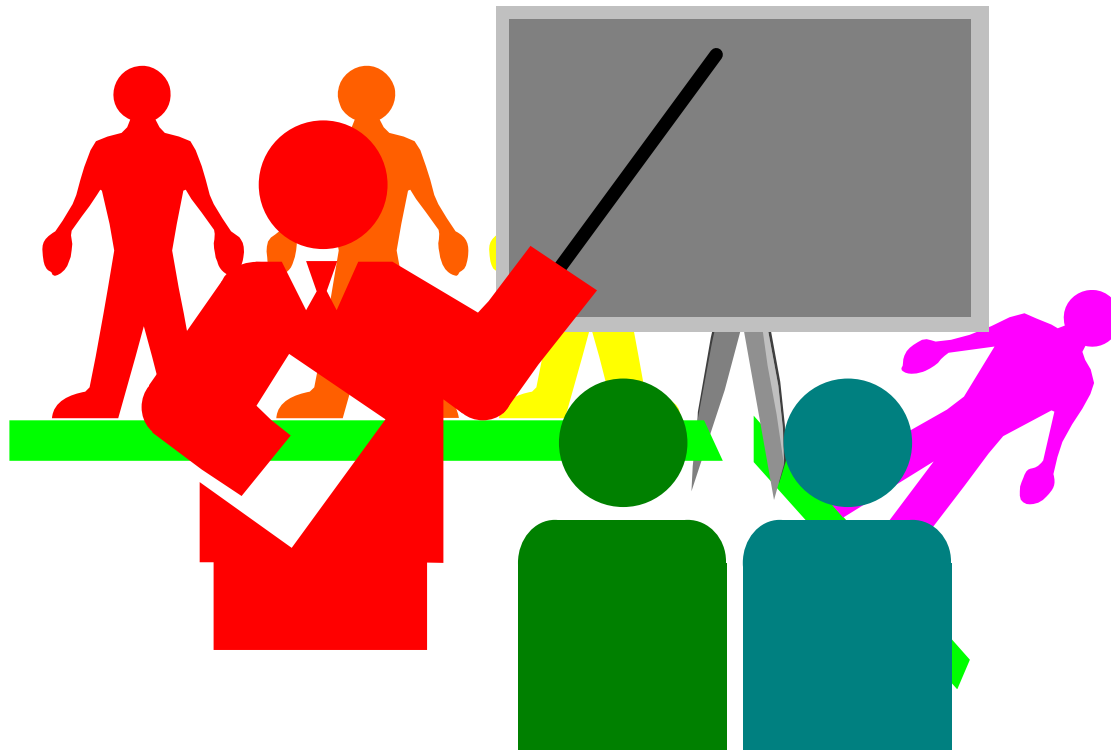


ASBESTOS PRESENTATION



By: THOMAS E LIVINGSTON

NHDES ARD

ASBESTOS PRESENTATION

- 1. What is Asbestos / Vermiculite**
- 2. The Asbestos Hazard**
- 3. Identification of Asbestos**
- 4. Who Regulates Asbestos**
- 5. Asbestos Regulations**
- 6. Asbestos Management**



1a

What is Asbestos

WHAT IS ASBESTOS?

- A Naturally Occurring Fibrous Mineral



Physical Properties of Asbestos

Asbestos Containing Materials (ACM):

- ✓ Are resistant to corrosion
- ✓ Have high tensile strengths
- ✓ Have low electrical conductivities
- ✓ Are non-combustible





1b

What is Vermiculite

RAW ORE



**PROCESSED
“POPPED”
ORE**



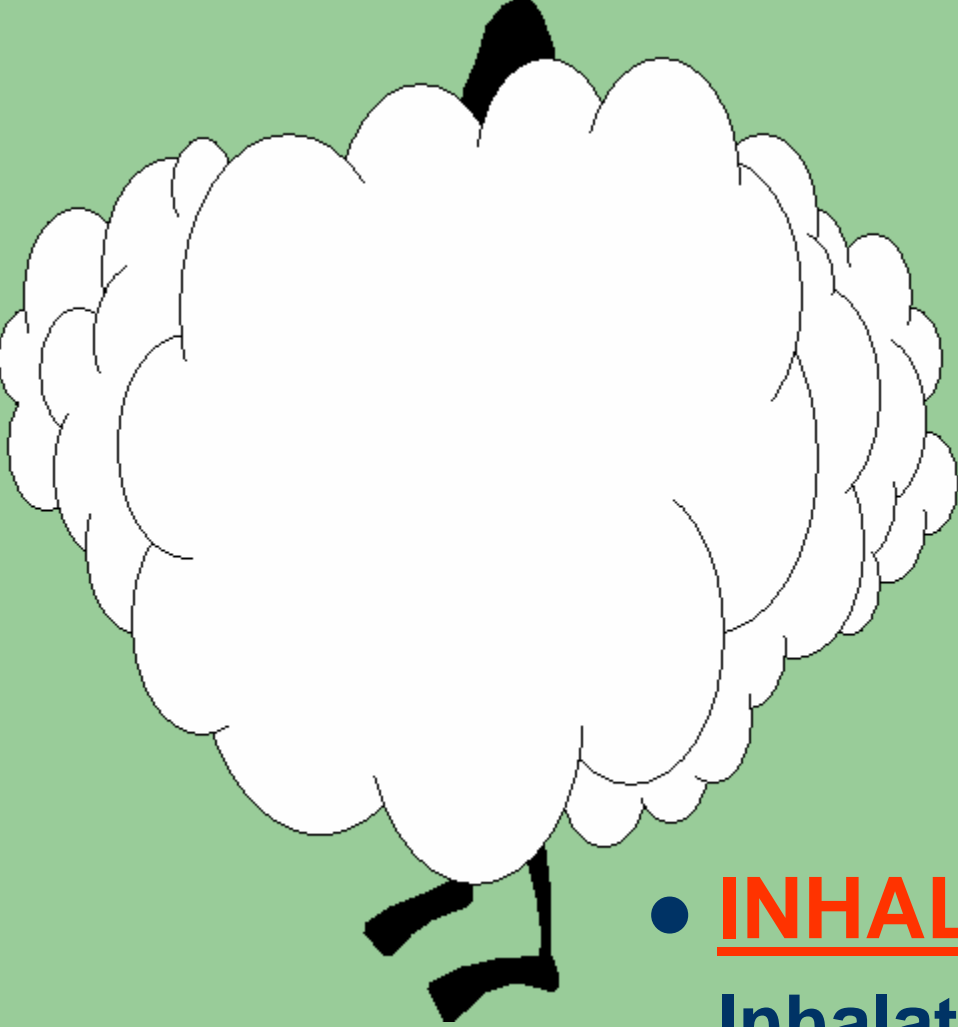
VERMICULITE UP CLOSE





2

Asbestos Hazards



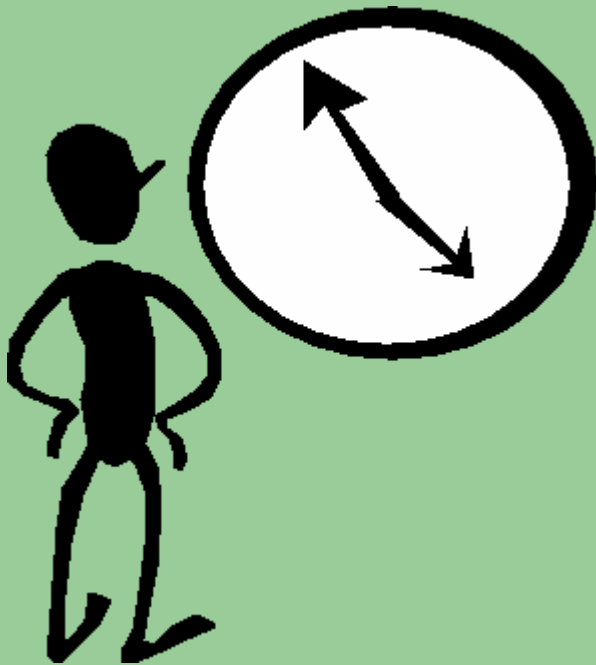
Types of Exposure:

- 1) Ingestion
- 2) **Inhalation**

- **INHALATION:**

Inhalation exposure occurs when airborne fibers are breathed in and deposited deep within the lung tissue.

Diseases associated with inhalation exposure to asbestos fibers

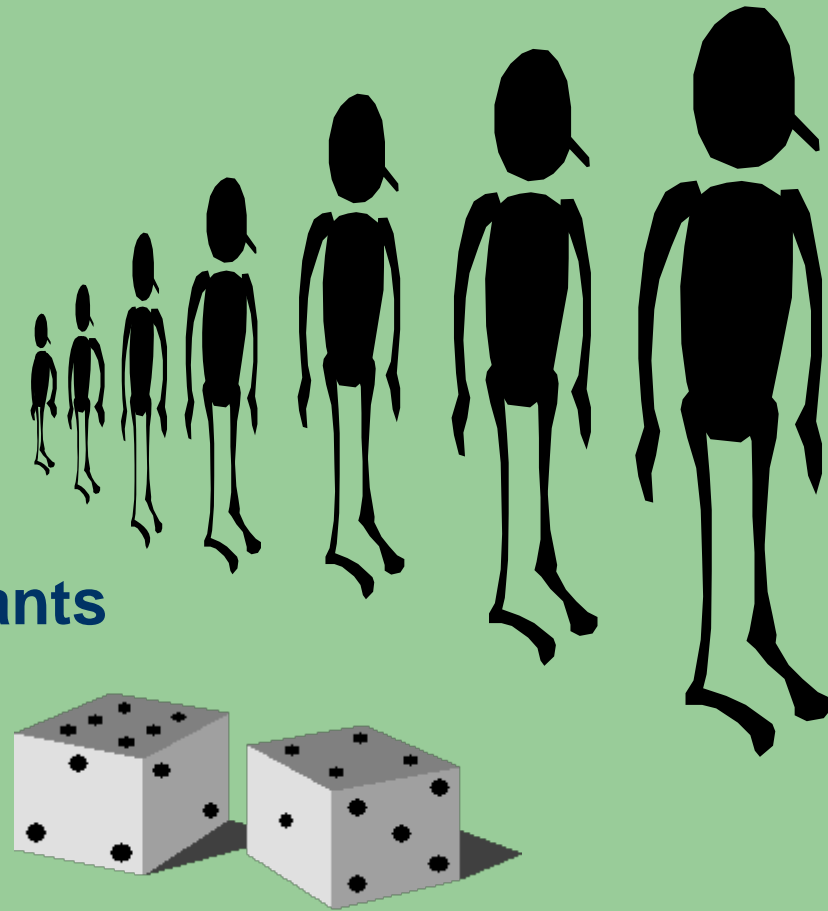


- Lung Cancer
- Mesothelioma
- Asbestosis

10 to 20 year latency Period

Factors that determine risk for developing disease

- Dose
- Duration of exposure
- Frequency
- Other environmental irritants
- Genetic predisposition





3

Identification of Asbestos

HOW TO RECOGNIZE ASBESTOS



Asbestos In The Waste Stream

- Thermal Insulation
- Roofing Materials
- Spray on Insulation
- Floor Tiles
- Adhesives
- Ceiling Tiles
- Siding
- Other Materials



Terminology

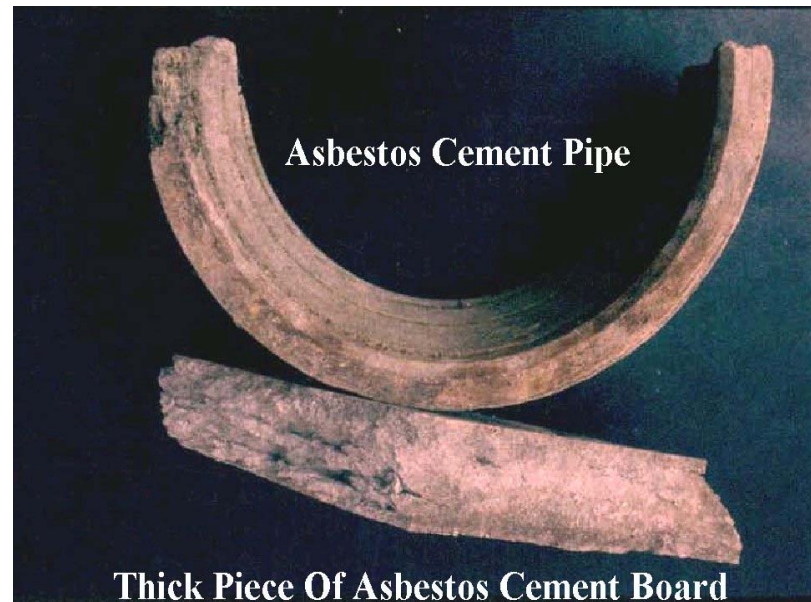
FRIABLE ASBESTOS

Asbestos containing materials which can be crushed or pulverized by hand pressure.



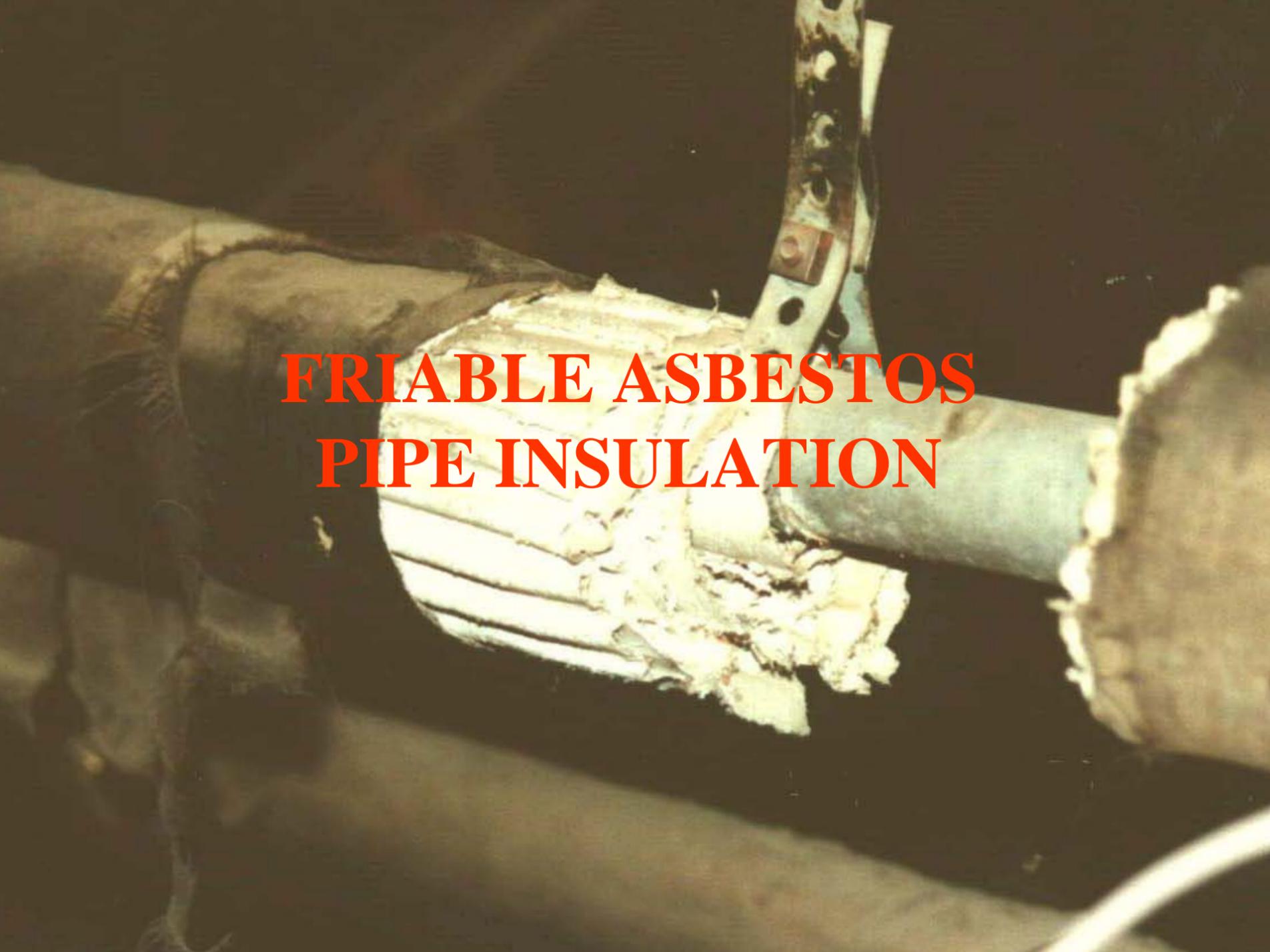
NON-FRIABLE ASBESTOS

Asbestos containing materials which can NOT be crushed by hand pressure.





**FRIABLE ASBESTOS
PIPE INSULATION**

A photograph of a pipe with severely damaged, crumbling white insulation. A metal bracket is visible on the pipe. The text "FRIABLE ASBESTOS PIPE INSULATION" is overlaid in red.

**FRIABLE ASBESTOS
PIPE INSULATION**



FRIABLE ASBESTOS PIPE INSULATION

**Decorative Brick Adhered
To Asbestos Board**



**ASBESTOS IN BUILDING
AND INDUSTRY**



**Machined
Asbestos Block**



Asbestos Dowel



Asbestos
"Spanish" Style
Roofing Tile



Peg Board



Transite Board



Asbestos Ceiling Tile



Asbestos Gasket



**Cylindrical
Asbestos
Countertop
Cut Out**

Pieces Of Various Types Of Board

**NON-FRIABLE PLATE
WASTE**



**Corrugated Board With
Textured Surface Pattern**



Asbestos Cement Pipe

**ASBESTOS SEWER
AND OTHER**

Thick Piece Of Asbestos Cement Board

A thick green horizontal bar with rounded ends, positioned at the top left of the slide.

A thick dark blue horizontal bar spanning most of the width of the slide.

4

**Who Regulates
Asbestos**



FEDERAL REQUIREMENTS

40 CFR 61 US EPA

- Mandates Inspections

49 CFR 107, 171-173 US DOT

- Packaging & Transport

40 CFR 763 AHERA

- Training For Inspectors

29 CFR 1926 US OSHA

- Employee Safety



NH REQUIREMENTS (NHDES)

Department of Environmental Services

Air Resources Division: Env-A 1800

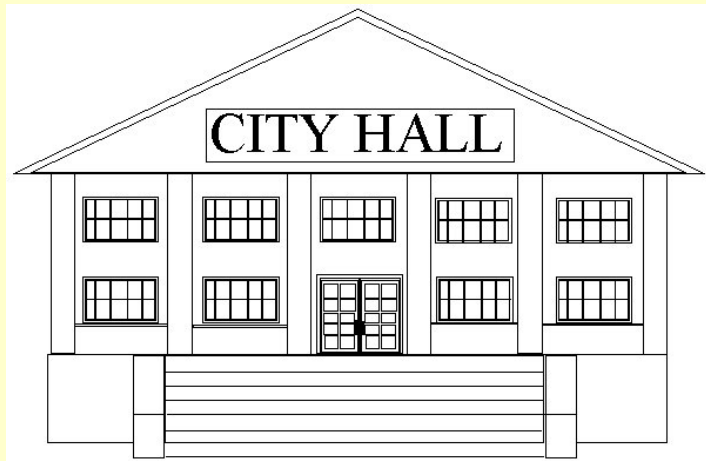
- Requires that Inspections for Asbestos be Conducted
- Establishes Work Practices for Asbestos Abatement Activities

Air Resources Division: He-P 5000

- Requires that Asbestos Abatement and Asbestos Disposal Site Contractors and Workers be Trained and Licensed.

Waste Management Division: PART Env-Wm 2601

- Establishes Asbestos Requirements



CITY/TOWN GOVERNMENTS

LOCAL REQUIREMENTS:

- **Building & Code Department Permitting.**
- **Notification**
 - 1. Code Department**
 - 2. Health Officer**
 - 3. Abutters**



5

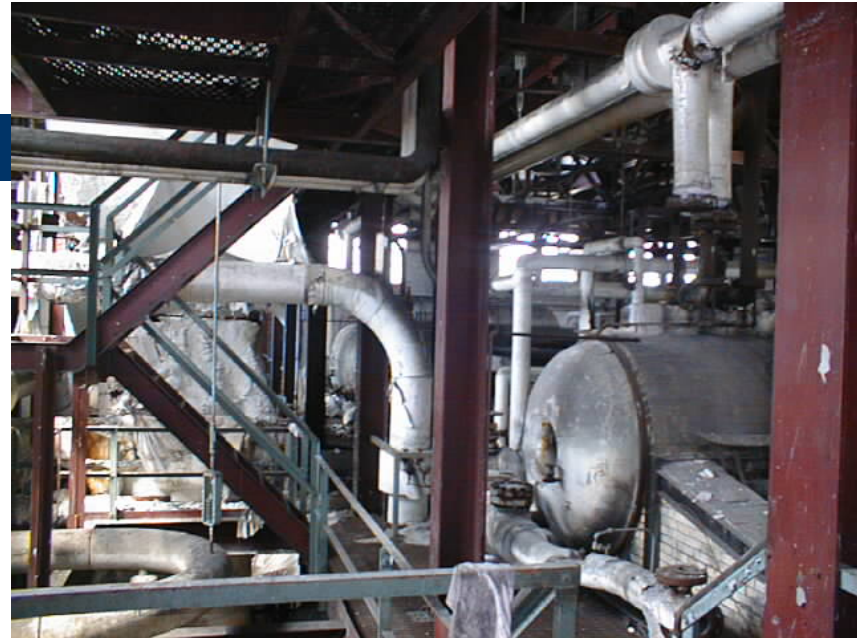
Asbestos Regulations

Pre- Demo Inspection

40 CFR 61

and

Env-A 1800



Mandates that materials which will be disturbed be inspected by a **“COMPETENT”** person, prior to being demolished.

Pre- Demo Inspection

Env-A 1800 defines “Competent” as:

“Capable of identifying asbestos hazards in a commercial, private, or residential structure, and who has completed, at a minimum, a training course for asbestos inspectors meeting the requirements of 40 CFR 763, Subpart E, Appendix C, Section I: 1,A.”

Pre- Demo Abatement

1. 40 CFR 61
2. Env-A 1800

Mandates that all Asbestos Containing Building Materials (ACBM) be **“REMOVED”** by a licensed asbestos abatement contractor, prior to the demolition of the building in which the ACBM is located.

Abatement of friable Asbestos

TWO ABATEMENT METHODS:

1) FULL CONTAINMENT:

2) GLOVE BAGGING:



[illegible]

PACKAGING REQUIREMENTS

- All waste is to be packaged “Wet”
- Packaging must allow no “visible emissions”
- Packaging must be “Sealed”
- Packaging must be properly “labeled”
- Packaged waste must be stored in a “Secure” location

STANDARD WASTE BAG

- OSHA Warning
- DOT Information
- Generator Label



PACKAGING

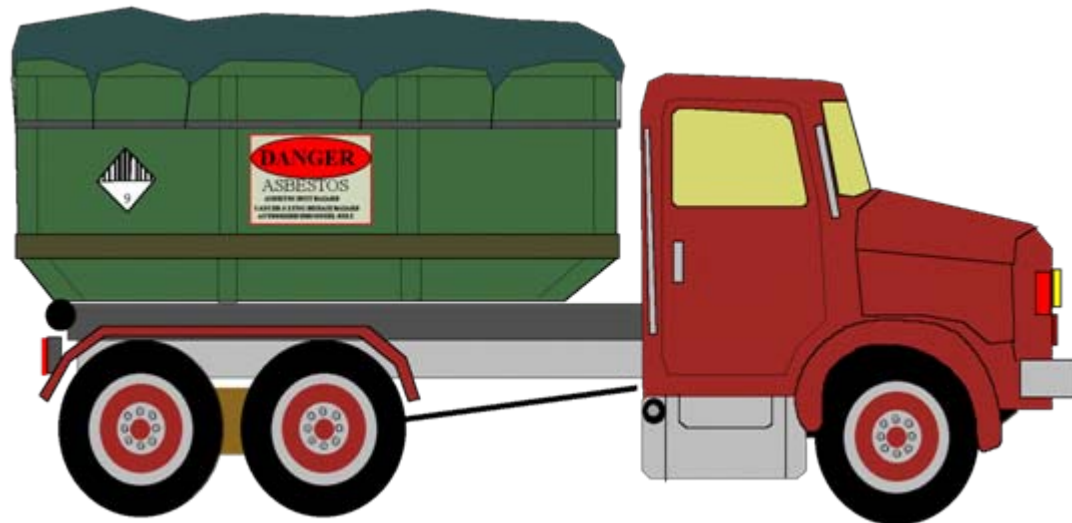
Non-Bulk Packaging

Asbestos bags, fiber drums, Gaylords, other leak proof containers usually used for small quantities



BULK PACKAGING

Placing waste directly into lined transport vehicles such as dumpsters, dump trucks, dump trailers. Liner must be leak proof and be a minimum of 20 mil thickness of polyethylene or its functional equivalent.



TRANSPORTATION DOCUMENTATION

- **USEPA - Waste Shipment Records**
- **USDOT- Waste Shipping Papers**

The Waste Shipment Record

✓ WHO OWNED THE ASBESTOS ?

✓ WHERE DID IT COME FROM ?

✓ WHO REMOVED AND PACKAGED IT?

✓ WHO TRANSPORTED THE ASBESTOS ?

✓ WHO IS RECEIVING THE ASBESTOS ?

WASTE SHIPMENT RECORD

GENERATOR (Retain copy of form)	1. Work site: Name: Mailing Address: City/State/Zip:		Owner's Name		Owner's Telephone #	
	2. Remover's name and address: Name: Mailing Address: City/State/Zip: He-P 5000 License #:				Remover's Telephone #	
	3. Waste Disposal Site (WDS), meaning the facility that will receive the waste: Name: Mailing Address: City/State/Zip: Physical Location:				WDS Telephone #	
	4. Name and address of responsible agency: NH Dept. of Environmental Services, PO Box 95, 6 Hazen Drive, Concord, NH 03302-0095					
TRANSPORTER (Retain copy of form)	5. Description of materials: Name: Asbestos Division Class #: 9 Identification #: NA2212 Packing Group #: III Reportable Quantity (RQ): 1 lb (one pound)		6. Containers No. Type		7. Total quantity (m³ or yd³)	
	8. Special handling instructions and additional information (provided by generator):					Emergency Telephone #
	9. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations. Printed/typed name & title Signature Month Day Year					
TRANSPORTER (Retain copy of form)	10. Transporter 1 (Acknowledgment of receipt of materials) Printed/typed name & title Address and telephone # Month Day Year Signature					
	11. Transporter 2 (Acknowledgment of receipt of materials) Printed/typed name & title Address and telephone # Month Day Year Signature					
	12. Discrepancy indication space: Rejected: Yes <input type="checkbox"/> No <input type="checkbox"/> Destination:					
DISPOSAL SITE (Retain copy of form & return original to 2 above)	13. Waste disposal site owner or operator: Certification of receipt of asbestos materials covered by this manifest except as noted in item 12. Printed/typed name & title Signature Month Day Year					



6

**Asbestos
Management**

Problems Can Result When:



- A homeowner or contractor who is not “competent” conducts the inspection.
- A homeowner or contractor who is not knowledgeable removes the Asbestos.
- The inspector is not able to see the ACM during the pre-demo inspection.





Questions?



THANK YOU

THE END